

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SHUSOU WADAKA, KOICHIRO MISU, TSUTOMU NAGATSUKA,
TOMONORI KIMURA, and SHUMPEI KAMEYAMA

Appeal No. 2006-1751
Application No. 09/778,872

HEARD: August 9, 2006



Before KRASS, JERRY SMITH, and BLANKENSHIP, Administrative Patent Judges.

BLANKENSHIP, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 24-40, 61, and 62.

We reverse.

BACKGROUND

The invention relates to a wafer that comprises a plurality of acoustic wave devices. Components are modified to adjust for variations in wafer material (e.g., thickness). Representative claim 24 is reproduced below.¹

24. A wafer having a plurality of acoustic wave devices formed thereon and exhibiting common operational characteristics, each of said acoustical wave devices manufactured according to a method comprising:

- (a) forming a ground electrode on the wafer which is intended to be placed on top of a semiconductor substrate;
- (b) forming a piezoelectric thin film on top of the ground electrode, wherein the piezoelectric thin film varies in at least one characteristic across the wafer; and
- (c) forming at least one upper electrode on top of the piezoelectric thin film,

wherein at least the ground electrode, the piezoelectric thin film and the at least one upper electrode form components, as a result of steps (a)-(c), in each of the plurality of acoustical wave devices, and

wherein at least one component in some of the plurality of acoustical wave devices is modified in its operational characteristic to compensate for the variation in the at least one characteristic of the piezoelectric thin film and is based on the location of the at least one acoustical wave device on the wafer.

The examiner relies on the following references:

Curran et al. (Curran) 3,401,275 Sep. 10, 1968

Krishnaswamy et al. (Krishnaswamy) 5,185,589 Feb. 9, 1993

¹ We observe that "the at least one acoustical wave device on the wafer" lacks proper antecedent basis in the claim.

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Vale et al. (Vale) 5,194,836 Mar. 16, 1993

Ishii et al. (Ishii) 5-259804 Oct. 8, 1993
(Japanese Kokai Patent Application)²

Claims 24-33 and 40 stand rejected under 35 U.S.C. § 102 as being anticipated by Krishnaswamy, Curran, Vale, or Ishii.

Claims 34-39, 61, and 62 stand rejected under 35 U.S.C. § 103. Ishii, Vale, or Curran is applied against claim 34. Krishnaswamy, Ishii, Vale, or Curran is applied against claims 35-39, 61, and 62.

Claims 1-16 have been canceled.

Claims 17-23 and 41-60 have been withdrawn from consideration.

We refer to the Final Rejection (mailed Oct. 9, 2002), the Examiner's Answer (mailed Sept. 11, 2003), and the Supplemental Answer (mailed Aug. 10, 2005) for a statement of the examiner's position and to the Brief (filed Mar. 10, 2003) and the Reply Brief (filed Nov. 10, 2003) for appellants' position with respect to the claims which stand rejected.

OPINION

Claim 24 is the sole independent claim in this appeal. The claim requires, inter alia, that at least one component in some of the plurality of acoustical wave devices is modified in its operational characteristic to compensate for the variation in the at least

² With English translation provided by the USPTO, Oct. 1995.

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one characteristic of the piezoelectric thin film and is based on the location of the at least one acoustical wave device on the wafer. The language is substantially the same as that considered by a panel of the Board in a claim (claim 42) in an earlier, related appeal in the parent application (No. 09/202,070; Appeal No. 2005-0185).³ In a decision entered April 27, 2005, we did not sustain the rejection of the corresponding claim in the parent application under 35 U.S.C. § 102 over any of the four references that are now applied, in the alternative, against instant claim 24.

The statement of the rejection of instant claim 24 (Answer at 3) does not point out where the above-noted limitation may be described in any of Krishnaswamy, Curran, Vale, or Ishii. In the responsive arguments section (*id.* at 4), the examiner alleges that “[t]he references all mention tuning at least the final frequency of each resonator (each with its own location on the wafer, thus wafer location based adjustments) via addition as subtraction [sic; addition or subtraction?] of mass.”

The rejection neglects, however, to point out where any of the references might contain description, express or inherent, of the teaching attributed to each of the references. Moreover, the rejection neglects to explain how such disclosure, even if present, might meet the requirements of instant claim 24; i.e., that at least one component (comprised of the ground electrode, piezoelectric thin film, and at least one upper electrode) in some of the plurality of acoustical wave devices is modified in its

³ The parent application issued on November 8, 2005 as US 6,963,155 B1.

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operational characteristic to compensate for the variation in the at least one characteristic of the piezoelectric thin film and is based on the location of the acoustical wave device on the wafer. Further, the rejection does not show disclosure, in any of the applied references, where the piezoelectric thin film varies in at least one characteristic (e.g., thickness) across the wafer, or otherwise account for the recitation that appears in claim 24.

We therefore reach substantially the same result as in the parent application. Because prima facie anticipation of at least instant claim 24 has not been demonstrated in view of the disclosure of any of Krishnaswamy, Curran, Vale, or Ishii, we do not sustain the rejection of claims 24-33 and 40 under 35 U.S.C. § 102. Nor do we sustain the rejection of claims 34-39, 61, and 62 under 35 U.S.C. § 103, as the rejection for alleged obviousness does not remedy the deficiencies in the rejection applied against base claim 24.

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CONCLUSION

The rejection of claims 24-33 and 40 under 35 U.S.C. § 102 and the rejection of claims 34-39, 61, and 62 under 35 U.S.C. § 103 are reversed.

REVERSED


ERROL A. KRASS

Administrative Patent Judge

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) BOARD OF PATENT

) APPEALS

) AND

) INTERFERENCES


JERRY SMITH

Administrative Patent Judge

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HOWARD B. BLANKENSHIP

Administrative Patent Judge

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